PHASE II: DEMONSTRATION AND VALIDATION

Step 12.0 Identify HF/S Inputs to RFPs and Procurement Documents

Objective:

- This step involves correctly identifying the HF/S specifications and standards within the HF/S sections of RFP's crucial to accomplishment of a comprehensive, targeted HF/S program.

Inputs:

- Results of prior analyses.

Outputs:

- HF/S inputs to RFPs and Procurement Documents.

12.1 Identify issues for RFPs

12.1.1 Review recent RFPs to identify product characteristics which have invoked HF/S requirements specifications and document modifications

12.1.2 Identify consistencies and trends in HFE requirements specifications across product applications

12.1.3 Identify HF/S issues from Step 2 for application to RFPs

- Personnel Availability Issues
  - System Development Requirements
    - Requirements and constraints on number of operating personnel
    - Requirements and constraints on number of maintenance personnel
    - Requirements and constraints on personnel workloads
    - Requirements and constraints on personnel workload distribution
    - Requirements and constraints on personnel selection
    - Requirements for manning
  - Lessons Learned
    - Expected problems with manning levels
    - Expected problems with workloads
- Personnel Utilization Issues
  - System Development Requirements
    - Constraints on personnel complement composition
    - Constraints on the role of man in system operation
    - Constraints on the role of man in system monitoring
    - Constraints on the role of man in system maintenance

- □ Constraints on the role of man in system support
- □ Constraints on the role of man in system setup
- □ Requirements for automation
  - Lessons Learned
    - □ Expected problems with personnel utilization
    - □ Expected problems with function allocation
- Personnel Capability Issues
  - System Development Requirements
    - □ Minimum skill level projection
    - □ Training requirements
    - □ Constraints on training overhead
    - □ Directed training decisions
    - □ Training effectiveness objectives
    - □ Constraints on training equipment and facilities
    - □ Requirements for special skills
    - □ Requirements for new skills
    - □ Constraints on the training pipeline
    - □ Requirements for embedded training
    - □ Requirements for computer assisted instruction
    - □ Requirements for cross training
    - □ Requirements for on-line tutorials/job performance aids
    - □ Requirements for decision aids
  - Lessons Learned
    - □ Expected problems with training
    - □ Expected problems with skills
- Personnel Performance Issues
  - System Development Requirements
    - □ Required levels of human performance
    - □ Requirements for sustained performance
    - □ Human performance objectives
    - □ Directed design decisions
    - □ System performance objectives which are expected to impact human performance
    - □ Information availability/quality constraints on human performance
    - □ Time constraints on human performance
    - □ Mission requirement constraints on human performance
    - □ Environmental constraints on human performance
    - □ Human capability constraints on human performance
    - □ System/equipment design constraints on human performance
    - □ Software design constraints on human performance
    - □ Procedural constraints on human performance
    - □ Operational constraints on human performance
    - □ Team performance requirements
    - □ Requirements for performance monitoring/measurement
    - □ Requirements for performance feedback
    - □ Duration of operation impact on performance
    - □ Mean time to repair estimate effects on maintainer performance
    - □ Mean time to perform preventive maintenance estimate effects on

maintainer performance
- Lessons Learned
  - Missions, operations, tasks and conditions having potentially high error rates
  - Missions, operations, tasks and conditions having potential performance problems
  - Hardware or software design features having potential performance problems
- <u>Personnel Safety & Health Issues</u>
  - System Development Requirements
    - Expected hazardous conditions
    - Directed design decisions
    - Mission requirement constraints on human safety and health
    - Environmental constraints on human safety and health
    - Human capability constraints on human safety and health
    - System/equipment constraints on human safety and health
    - Software constraints on human safety and health
    - Procedural constraints on human safety and health
    - Operational constraints on human safety and health
    - Biomedical constraints
    - Habitability constraints
    - Requirements for protective equipment
    - Requirements for warnings and alarms
  - Lessons Learned
    - Missions, operations, tasks and conditions having potentially high accident rates
    - Missions, operations, tasks and conditions having an effect on or affected by protective equipment
    - Hardware or software design features having potential safety and health problems

12.2 Identify evaluation criteria

12.2.1 Identify specific HF/S requirements expressed in the HF/S SOW, system specification, data reporting requirements, etc.

- for workload reduction
- for skill reduction
- for error reduction
- for accident reduction

12.2.2 State criteria within the context of analysis planning, integration, risk identification, and personnel requirements

12.3 Formulate HF/S inputs to solicitation documents

12.3.1 Provide HF/S inputs to RFP preparation to be applied to the statement of work (SOW), that establishes what the Coast Guard wants to contractor to do in developing the system

12.3.2 Provide HF/S inputs to RFP preparation to be applied to the system specification, that describes what the Coast Guard wants the product to do, under existing conditions and constraints

12.3.3 Provide HF/S inputs to RFP preparation to be applied to the data requirements, which is information the contractor is required to furnish the government

12.3.4 Provide HF/S inputs to RFP preparation to be applied to the instructions to offerors, that provides guidance on writing a responsive proposal

12.3.5 Provide HF/S inputs to RFP preparation to be applied to the proposal evaluation criteria, that explains to the offeror how the proposal will be evaluated by the Source Selection Evaluation Board

12.4 Provide source selection criteria

12.4.1 Assess HF/S evaluation criteria

12.4.2 Prioritize criteria in the context of HF/S and system characteristics

12.5 Package HF/S inputs

12.5.1 Integrate HF/S issues with HF/S evaluation criteria

12.5.2 Submit inputs for procurement